## STATEMENT OF BASIS

as required by LAC 33:IX.3109 for LPDES facilities, for draft **Louisiana Pollutant Discharge Elimination System Permit No. LA0099473; AI 32219; PER20090005** to discharge to waters of the **State of Louisiana** as per LAC 33:IX.2311.

The **permitting authority** for the Louisiana Pollutant Discharge Elimination System (LPDES) is:

Louisiana Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

I. **THE APPLICANT IS:** River Birch, Inc.
River Birch Landfill
P.O. Box 1938
Gretna, LA 70054

II. **PREPARED BY:** Angela Marse

**DATE PREPARED:** April 21, 2010

III. **PERMIT ACTION:** reissue LPDES permit LA0099473, AI 32219; PER20090005

LPDES application received: July 31, 2009

LPDES permit issued: February 1, 2005
LPDES permit expired: January 31, 2010

IV. **FACILITY INFORMATION:**

A. The application is for the discharge of non contact stormwater from inactive landfill areas, treated leachate, treated contact stormwater from the active disposal area, pore water, treated truck wash water, and treated sanitary wastewater from a non-hazardous solid waste landfill serving the following parishes: Orleans, Jefferson, Plaquemines, St. Tammany, Terrebonne, St. Charles, St. Mary, St. James, Assumption, St. Bernard, St. John the Baptist, Lafourche, and St. Martin.

B. The facility is located on the east side of Kenner Road, 1/2 mile north of its intersection with US Hwy. 90 in Waggaman, Jefferson Parish.

C. The treatment facility for leachate, contact stormwater, truck wash water, and pore water consists of an aeration pond. Treatment for sanitary wastewater consists of a mechanical treatment plant.

D. Outfall 001

Discharge Location: Latitude 29° 56' 23" North
Longitude 90° 14' 57" West

Description: treated leachate, treated contact stormwater from active disposal areas, pore water, and treated truck wash water

Expected flow: 0.21 MGD

Type of Flow Measurement which the facility is currently using:
butterfly valve set to 8700gallons per hour or approximately 0.21 MGD.

Outfall 002

Discharge Location: Latitude 29° 55' 38" North
Longitude 90° 16' 02" West

Description: treated sanitary wastewater

Design Capacity: 0.0015 MGD

Type of Flow Measurement which the facility is currently using:
estimate based on design capacity of the facility

Outfall 003

Discharge Location: Latitude 29° 55' 57" North
Longitude 90° 15' 28" West

Description: non-contact stormwater

Expected flow: 2 MGD

Type of Flow Measurement which the facility is currently using:
Calculation based on rainfall and drainage area

Outfall 004

Discharge Location: Latitude 29° 56' 32" North
Longitude 90° 15' 02" West

Description: non-contact stormwater

Expected flow: not active at this time, included for future expansion

Type of Flow Measurement which the facility will use:
Calculation based on rainfall and drainage area

Outfall 005

Discharge Location: Latitude 29° 56' 16" North
Longitude 90° 15' 02" West

Description: non-contact stormwater

Expected flow: not active at this time, included for future expansion

Type of Flow Measurement which the facility will use:
Calculation based on rainfall and drainage area

## V. RECEIVING WATERS:

The discharge is into Sauls Canal, thence into Waggaman Canal, thence into Lake Cataouatche in segment 020501 of the Barataria Basin. This segment is listed on the 303(d) list of impaired waterbodies.

The **critical low flow** (7Q10) of the Sauls Canal is 0.1cfs.

The **hardness value** is 299 mg/l and the **fifteenth percentile value for TSS** is 34.9 mg/l.

The designated uses and degree of support for Segment 020501 of the Barataria Basin are as indicated in the table below[1/]:

| Degree of Support of Each Use | | | | | | |
|---|---|---|---|---|---|---|
| Primary Contact Recreation | Secondary Contact Recreation | Propagation of Fish & Wildlife | Outstanding Natural Resource Water | Drinking Water Supply | Shell fish Propagation | Agriculture |
| Not supported | Full supported | Not supported | N/A | N/A | N/A | N/A |

[1/]The designated uses and degree of support for Segment 020501 of the Barataria Basin are as indicated in LAC 33:IX.1123.C.3, Table (3) and the 2006 Water Quality Management Plan, Water Quality Inventory Integrated Report, Appendix A, respectively.

Section 303 (d) of the Clean Water Act as amended by the Water Quality Act of 1987, and EPA's regulations at 40 CFR 130 require that each state identify those waters within its boundaries not meeting water quality standards. The Clean Water Act further requires states to implement plans to address impairments. LDEQ is developing Total Maximum Daily Loadings Studies (TMDLs) to address impaired waterbodies. Segment 020501 of the Barataria Basin is on the 2006 Integrated 303(d) List of Impaired Waterbodies. The suspected causes of impairment are chlorides, fecal coliform, nitrate/nitrite, low dissolved oxygen, phosphorus, sulfates, and TDS. Sources of the impairment are attributed to forced drainage pumping, municipal point sources, and drought related impacts. A TMDL for low dissolved oxygen has been developed to address impairments and is discussed below. LDEQ will develop a TMDL to address fecal coliform impairments. Chlorides, sulfates, and TDS are listed on the EPA integrated report. EPA will develop TMDLs for these impairments.

*DO TMDL for St. Charles Parish Canals and Bayous in Segment 0205*. The waterbodies of interest in this subsgement are two manmade drainage canals named Main Canal and Avondale Gardens Canal. A total of five National Pollutant Discharge Elimination System (NPDES) permits were identified for point source discharges within subsegment 020501. These point sources were obtained by reviewing data from both DEQ and EPA. None of these facilities discharges directly into the waterbodies of interest in this subsegment (Main Canal and Avondale Gardens Canal). Therefore, no point sources were included in this model. "The nonconservative behavior of dissolved oxygen allows many small or remote point source dischargers to be assimilated by their receiving waterbodies before they reach the modeled waterbody. These dischargers are said to have very little to no impact on the modeled waterbody and therefore, they are not included in the model and are not subject to any reductions based on this TMDL." LDEQ will work with other agencies (ie: Soil Conservation Districts) to implement nonpoint source best management practices to control and reduce runoff of soil and oxygen-demanding pollutants.

Permit limits are based on the Effluent Guidelines for Landfills and include BOD and ammonia limits. LDEQ's position, as stated in the declaratory ruling issued by Dale Givens regarding water quality criteria for nutrients (Sierra Club v. Givens, 710 So.2d 249 (La. App. 1st Cir. 1997), writ denied, 705 So. 2d 1106 (La. 1998)), is that when oxygen-demanding substances are controlled and limited in order to ensure tha the dissolved oxygen criterion is supported, nutrients are also controlled and implementation. Nitrate/nitrite, ammonia, and phosphorus are considered nutrients. Ammonia is a common product of the decomposition of organic matter found in human waste and other wastewaters. In the presence of dissolved oxygen, ammonia is converted to nitrate by nitrifying bacteria. (Nitrite is an intermediate product between ammonia and nitrate thus, the relationship between ammonia and nitrate/nitrite.) Monitoring for ammonia indirectly monitors for nitrite/nitrate.

Sulfates and chlorides are also limited in the permit. Effluent limits are based on the previous permit. The previous permit required monitoring and reporting of turbidity. The reissued permit will require monitoring and reporting of TDS.

Monitoring for fecal coliform is the best indicator for the potential presence of pathogenic organisms in wastewater. To protect against potential receiving water impairments due to pathogens, fecal coliform limits have been established in the permit. Permit limits are reflective of water quality standards for primary contact recreation, a designated use of the receiving stream.

## VI. ENDANGERED SPECIES:

The receiving waterbody, Subsegment 020501 of the Barataria Basin, is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U. S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated January 5, 2010 from Rieck (FWS) to Nolan (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. It was determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

## VII. HISTORIC SITES:

The discharge is from an existing facility location, which does not include an expansion beyond the existing perimeter. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the 'Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits' no consultation with the Louisiana State Historic Preservation Officer is required.

## VIII. PUBLIC NOTICE:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List

For additional information, contact:

Mrs. Angela Marse
Water Permits Division
Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

## IX. PROPOSED PERMIT LIMITS:

### Final Effluent Limits:

### OUTFALL 001

Outfall 001 is designated for the discharge of treated landfill wastewater consisting of leachate, pore water, contact stormwater, and truck washwater. (Pore water is groundwater that is pushed up under the liner of the landfill and pumped out to relieve pressure on the liner.) Effluent limits are the same as the previous permit. As stated previously, monitoring and reporting of TDS will be required instead of turbidity. Effluent limits are based on the previous permit, EPA Effluent Guidelines, and water quality based limits derived from receiving stream characteristics.

The previous permit contained a chloride limit of 850 mg/l that was approved through a previous permit modification and variance issued December 1, 2003. The limit was based on high chloride levels in the facility's pore water and receiving stream (Sauls Canal). (See EDMS Document No. 22287162 dated March 14, 2002.) The chloride standard for the receiving stream subsegment is 65 mg/l. The basis for the low standard was also unclear. A resolution of the appropriateness of the chloride standard was to be derived during the three year interim period starting with the effective date of the previous permit. The permit was to be modified to reflect the change in standard. (See previous permit EDMS Doc. No. 33073129.) No resolution was reached to change the standard. In a letter dated January 31, 2007, River Birch requested a modification to allow the higher effluent limit to continue. The modification request was withdrawn in March, 2007. As an alternative, River Birch agreed to limit the rate at which holding pond water was discharged to 275,000 GPD.

River Birch was issued an Administrative Order (AO) on June 30, 2009 (EDMS Doc No. 42193912) granting them authority to accept exploration and production wastes (crude oil spill clean-up and drilling waste defined as mud, fluids, and cuttings) for disposal in the landfill. For accepting the waste additional sampling requirements were established in the AO. The additional requirements include increased monitoring for priority pollutants at outfall 001 and a chloride limit at outfall 003, 004, and 005. These requirements are incorporated in the LPDES draft permit.

Because no resolution of the standard was reached and River Birch has been authorized to accept E&P wastes, this Office has calculated a water quality based effluent limit for chloride. Chlorides criteria are to be met below the mixing zone and are developed over a long-term period using the harmonic mean flow. For this reason, the human health criteria apply in developing the limit. (LAC 33:IX.1115.C8.) The daily maximum water quality based effluent limit for chloride is 631 mg/l.

Final limits shall become effective on the effective date of the permit and expire on the expiration date of the permit.

| Effluent Characteristic | Monthly Avg. | Daily Max. | Basis |
|---|---|---|---|
| $BOD_5$ | 30 mg/l | 45 mg/l | Previous permit limit and permit limits for similar effluents/facilities. |
| TSS | 27 mg/l | 45 mg/l | The monthly average is based on EPA Effluent Guidelines Pretreatment Standards, and New Source Performance Standards for Landfills Point Source Category at 40 CFR Part 445. The Daily Maximum is based on the previous permit limit and permit limits for similar effluents/facilities. |
| Oil &grease | --- | 15 mg/l | Previous permit limit to address truck/equipment washing and Multi Sector General Permit-Sector L (reissued May 1, 2006. |
| Chlorides | --- | 631 mg/l | Water Quality Based Effluent Limit. |
| Sulfates | --- | 250 mg/l | Best professional judgment based on previously issued permits for similar facilities/effluents. |
| TDS | --- | Report mg/l | BPJ based on receiving waterbody impairments. |
| Ammonia-Nitrogen | 4.9 mg/l | 10 mg/l | Effluent Limitations Guidelines Pretreatment Standards, and New Source Performance Standards for Landfills Point Source Category at 40 CFR Part 445. |
| Alpha Terpineol | 0.016 mg/l | 0.033 mg/l | Effluent Limitations Guidelines Pretreatment Standards, and New Source Performance Standards for Landfills Point Source Category at 40 CFR Part 445. |
| Benzoic Acid | 0.071 mg/l | 0.12 mg/l | Effluent Limitations Guidelines Pretreatment Standards, and New Source Performance Standards for Landfills Point Source Category at 40 CFR Part 445. |
| p-Cresol | 0.014 mg/l | 0.025 mg/l | Effluent Limitations Guidelines Pretreatment Standards, and New Source Performance Standards for Landfills Point Source Category at 40 CFR Part 445. |
| Phenol | 0.015 mg/l | 0.026 mg/l | Effluent Limitations Guidelines Pretreatment Standards, and New Source Performance Standards for Landfills Point Source Category at 40 CFR Part 445. |
| Zinc | 0.11 mg/l | 0.2 mg/l | Effluent Limitations Guidelines Pretreatment Standards, and New Source Performance Standards for Landfills Point Source Category at 40 CFR Part 445. |

**Other Effluent Limitations:**

**1) Fecal Coliform**

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5., the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Daily Maximum) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional

Judgement in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

**2) pH**

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time. (Limits as established through BPJ considering BCT for similar waste streams in accordance with LAC 33:IX.5905.C.)

**3) Solids and Foam**

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

**4) Priority Pollutant Scan**

The treatment facility will be treating leachate and contact stormwater. Studies have shown the leachate generated at municipal solid waste landfills can be highly concentrated and variable, and may include the presence of priority pollutants. Contributing to this variability may be the presence of household hazardous waste in the municipal solid waste stream (EPA, 1987). Pollutants which may be found in leachate include volatile organic compounds, metals, and pesticides.

This Office has established a list of priority pollutants with threshold limits intended as action levels. Should a substance exceed the level of the established concentration, the Department is to be notified, in writing, within five (5) days of exceedance and River Birch Landfill shall institute a study to determine the source of the substance. Within sixty (60) days of the written notification the permittee shall submit a written account of the nature of the study, the study results, and measures being taken to secure abatement.

1. Draft Threshold Limits – The draft threshold limits are derived from either technology-based effluent limits or State Water Quality Standards and requirements. The most stringent of these limits is contained in the permit. Technology-based effluent limitations are based on the applicable effluent limitations guidelines, on Best Professional Judgment (BPJ) in the absence of applicable guidelines, or on a combination of these two methods. Currently, there are guidelines for the treatment of leachate from a municipal solid waste landfill and they have been included in the permit in addition to these threshold values. This office intends to employ technology-based effluent limitations taken from previously issued BPJ based water discharge permits for municipal solid waste landfills and other land disposal facilities. Each of the guideline regulations were accompanied by a development document, which provided the support for the final guideline. A water quality screen was performed using stream characteristics for Sauls Bayou. This screen was used to establish water quality based limits. (See Appendix A-1.)

2. Derivation of Threshold Limits

**LDEQ/EPA Technology-Based Limits** – In the early 1980's the LDEQ and EPA developed effluent limitations for all of the priority pollutants contained in the EPA 2C application for land disposal facilities. Although the limitations were technology-based and derived prior to formal State water quality criteria, water quality considerations played a significant role in the development of the limits.

The threshold limits established for metals and pesticides are water quality based in accordance with the state water quality criteria (Appendix A-1). Metals for which state criteria have not been

promulgated; threshold limits have been established using technology-based effluent limits taken from water discharge permits previously issued to municipal solid waste landfills and other land disposal facilities. In accordance with the water quality standards, there may be no discharge of PCBs.

| Chemical | DEQ/EPA Daily Max. ug/l | WQBL Daily Max. ug/l | Threshold Value ug/l | Analytical Level Required ug/l |
|---|---|---|---|---|
| **METALS, CYANIDE, AND TOTAL PHENOLS** | | | | |
| Total Antimony | 600 | | 600 | 60 |
| Total Arsenic | 100 | 728 | 100 | 10 |
| Total Beryllium | 100 | | 100 | 5 |
| Total Cadmium | 100 | 18 | 18 | 1 |
| Chromium III | 100 | 4995 | 100 | 10 |
| Chromium VI | 100 | 16 | 16 | 10 |
| Total Copper | 100 | 191 | 100 | 10 |
| Total Cyanide | 100 | 12 | 12 | 20 |
| Total Lead | 150 | 116 | 116 | 5 |
| Total Mercury | 10 | 0.07 | 0.07 | 0.2 |
| Total Nickel (freshwater) | 500 | 2788 | 500 | 40 |
| Total Selenium | 100 | | 100 | 5 |
| Total Silver | 100 | | 100 | 2 |
| Total Thallium | 100 | | 100 | 10 |
| Total Phenols | 50 | | 50 | 5 |
| **VOLATILE COMPOUNDS** | | | | |
| Acrolein | 100 | | 100 | 50 |
| Acrylonitrile | 100 | | 100 | 50 |
| Benzene | 100 | 100 | 100 | 10 |
| Bromodichloromethane | 100 | 32 | 32 | 10 |
| Bromoform | 100 | 337 | 100 | 10 |
| Carbon Tetrachloride | 100 | 12 | 12 | 10 |
| Chlorobenzene | 100 | | 100 | 50 |
| Chloroethane | 100 | | 100 | 10 |
| 2-Chloroethyl vinyl ether | 100 | | 100 | 50 |
| Chloroform | 100 | 679 | 100 | 10 |
| Dibromochloromethane | 100 | 49 | 49 | 10 |
| 1,1-Dichloroethane | 100 | | 100 | 10 |
| 1,2-Dichloroethane | 100 | 66 | 66 | 10 |
| 1,1-Dichloroethylene (1,1-Dichloroethene) | 100 | 6 | 6 | 10 |
| 1,2-Dichloropropane | 100 | | 100 | 10 |
| 1,3-Dichloropropene (1,3-Dichloropropylene) | 100 | | 100 | 10 |
| Ethylbenzene | 100 | 3283 | 100 | 10 |
| Methyl Bromide (Bromomethane) | 100 | | 100 | 50 |
| Methyl Chloride (Chloromethane) | 100 | 844 | 100 | 50 |
| Methylene Chloride | 100 | | 100 | 20 |
| 1,1,2,2,-Tetra-chloroethane | 100 | 17 | 17 | 10 |
| Tetrachloroethylene | 100 | 24 | 24 | 10 |

| | | | | |
|---|---|---|---|---|
| 1,2-*trans*-Dichloroethylene | 100 | | 100 | 10 |
| Toluene | 100 | 1302 | 100 | |
| 1,2-*trans*-Dichloroethylene (1,2-dichloroethene) | 100 | | 100 | 10 |
| 1,1,1-Trichloroethane | 100 | 5416 | 100 | 10 |
| 1,1,2-Trichloroethane | 100 | 67 | 67 | 10 |
| Trichloroethylene (Trichloroethene) | 100 | 204 | 100 | 10 |
| Vinyl Chloride | 100 | 347 | 100 | 10 |
| **ACID COMPOUNDS** | | | | |
| 2-Chlorophenol (*o*-Chlorophenol) | 100 | 265 | 100 | 10 |
| 2,4-Dichlorophenol | 100 | 207 | 100 | 10 |
| 2,4-Dimethylphenol | 100 | | 100 | 10 |
| 2,4-Dinitrophenol | 100 | | 100 | 50 |
| 4,6-Dinitro-*o*-Cresol {4,6-Dinitro-*o*-phenol} {4,6-Dinitro-2-mehtyl phenol} | 100 | | 100 | 50 |
| 2-Nitrophenol | 100 | | 100 | 20 |
| 4-Nitrophenol | 100 | | 100 | 50 |
| P-Chloro-M-Cresol | 100 | | 100 | |
| Pentachlorophenol | 100 | | 100 | 50 |
| Phenol | 100 | | 100 | 10 |
| 2,4,6-Trichlorophenol | 100 | | 100 | 10 |
| **PESTICIDES** | | | | |
| Aldrin | 10 | 0.004 | 0.004 | 0.05 |
| Chlordane | 10 | 0.0018 | 0.0018 | 0.2 |
| DDD | 10 | 0.003 | 0.003 | 0.1 |
| DDE | 10 | 0.0018 | 0.0018 | 0.1 |
| DDT | 10 | 0.0022 | 0.0022 | 0.1 |
| Dieldrin | 10 | 0.005 | 0.005 | 0.1 |
| Endosulfan | 10 | 0.12 | 0.12 | 0.1 |
| Endosulfan | 10 | 0.12 | 0.12 | |
| Total Endosulfan | | 0.24 | 0.24 | 0.1 |
| Endosulfan sulfate | 10 | | 10 | 0.1 |
| Endrin | 5 | 0.08 | 0.08 | 0.1 |
| Endrin aldehyde | 10 | | 10 | 0.1 |
| Heptachlor | 10 | 0.007 | 0.007 | 0.05 |
| Heptachlor Epoxide | 10 | | 10 | 0.05 |
| Hexachlorocyclohexane – (BHC-) | 10 | | 10 | 0.05 |
| Hexachlorocyclohexane – (BHC-) | 10 | | 10 | 0.05 |
| Hexachlorocyclohexane – (BHC-) | 10 | | 10 | 0.05 |
| Hexachlorocyclohexane – (Lindane) | 10 | 0.45 | 0.45 | 0.05 |
| Total PCB's | No discharge | | | 1.0 |
| Toxaphene | 10 | 0.0004 | 0.0004 | 5.0 |
| **BASE/NEUTRAL COMPOUNDS** | | | | |
| Acenaphthene | 100 | | 100 | 10 |

| | | | | |
|---|---|---|---|---|
| Acenapthylene | 100 | | 100 | 10 |
| Anthracene | 100 | | 100 | 10 |
| Benzidene | 100 | 0.0016 | 0.0016 | 50 |
| Benzo(*a*)anthracene | 100 | | 100 | 10 |
| 3,4-Benzofluoranthene {Benzo(*b*)fluoranthene} | 100 | | 100 | 10 |
| Benzo(*k*)fluoranthene | 100 | | 100 | 10 |
| Benzo(*a*)pyrene | 100 | | 100 | 10 |
| Benzo(*ghi*)perylene | 100 | | 100 | 10 |
| Benzyl butyl Phthalate {Butyl benzyl Phthalate} | 100 | | 100 | 10 |
| *Bis*(2-chloroethyl)ether | 100 | | 100 | 10 |
| *Bis*(2-chloroethoxy) methane | 100 | | 100 | 10 |
| *Bis*(2-ethylhexyl) Phthalate | 100 | | 100 | 10 |
| *Bis*(2-chloroisopropyl) ether | 100 | | 100 | 10 |
| 4-Bromophenyl phenyl ether | 100 | | 100 | 10 |
| 2-Chloronaphthalene | 100 | | 100 | 10 |
| 4-Chlorophenyl phenyl ether | 100 | | 100 | 10 |
| Chrysene | 100 | | 100 | 10 |
| Dibenzo (*a,h*) anthracene | 100 | | 100 | 20 |
| Di-*n*-Butyl Phthalate | 100 | | 100 | 10 |
| 1,2-Dichlorobenzene | 100 | | 100 | 10 |
| 1,3-Dichlorobenzene | 100 | | 100 | 10 |
| 1,4-Dichlorobenzene {p-Dichlorobenzidine} | 100 | | 100 | 10 |
| 3,3-Dichlorobenzidine | 100 | | 100 | 50 |
| Diethyl Phthalate | 100 | | 100 | 10 |
| Dimethyl Phthalate | 100 | | 100 | 10 |
| 2,6-Dinitrotoluene | 100 | | 100 | 10 |
| 2,4-Dinitrotoluene | 100 | | 100 | 10 |
| Di-*n*-octyl Phthalate | 100 | | 100 | 10 |
| 1,2-Diphenylhydrazine | 100 | | 100 | 20 |
| Fluoranthene | 100 | | 100 | 10 |
| Fluorene | 100 | | 100 | 10 |
| Hexachlorobenzene | 100 | 0.002 | 0.002 | 10 |
| Hexachlorobutadiene | 100 | 1.07 | 1.07 | 10 |
| Hexachlorocyclopentadiene | 100 | | 100 | 10 |
| Hexachloroethane | 100 | | 100 | 20 |
| Ideno (1,2,3-*cd*)pyrene | 100 | | 100 | 20 |
| Isophorone | 100 | | 100 | 10 |
| Naphthalene | 100 | | 100 | 10 |
| Nitrobenzene | 100 | | 100 | 10 |
| N-nitrosodimethylamine | 100 | | 100 | 50 |
| N-nitrosodiphenylamine | 100 | | 100 | 20 |
| N-nitrosodi-*n*-propylamine | 100 | | 100 | 20 |
| Phenanthrene | 100 | | 100 | 10 |
| Pyrene | 100 | | 100 | 10 |
| 1,2,4-Trichlorobenzene | 100 | | 100 | 10 |

* Total Chromium has been removed from State Water Quality Standards and replaced with criteria for Chromium III and Chromium VI, reference to Total Chromium has been removed from the PPS tables.

A number of the threshold limitations established from the criteria are below detectable analytical levels. Where the permit limits are below the analytical level the following is noted in the permit:

If any individual analytical test result is less than the analytical level listed above, a value of zero(0) may be used as the test result for those parameters for the Discharge Monitoring Report (DMR) calculations and reporting requirements.

**5) Toxicity Characteristics**

Based on information contained in the permit application, LDEQ has determined there may be pollutants present in the effluent which may have the potential to cause toxic conditions in the receiving stream in violation of Section 101(a)(3) of the Clean Water Act. The State has established a narrative criteria which, in part, states that "No substances shall be present in the waters of the State or the sediments underlying said waters in quantities alone or in combination will be toxic to human, plant, or animal life..." (LAC 33:IX.1113.B.5)

LAC33:IX.1121.B.3. provides for the use of biomonitoring to monitor the effluent for protection of State waters. Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates the effects of synergism of the effluent components and receiving stream water quality characteristics. Chronic biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. The biomonitoring procedures stipulated as a condition of this permit are as follows:

The permittee shall submit the results of any biomonitoring testing performed in accordance with the LPDES Permit No. LA0099473, Part II, Section E for the organisms indicated below.

| | |
|---|---|
| Chronic static renewal 7-day survival & reproduction test using Ceriodaphnia dubia (Method 1002.0) | 1/quarter |
| Chronic static renewal 7-day survival & growth test using fathead minnow (Pimephales promelas) (Method 1000.0) | 1/quarter |

This frequency is based on recommendation by LDEQ Biomonitoring personnel (see attached recommendation), the receiving stream, and the facility's previous biomonitoring test results. Data on file indicates that the permittee has experienced 1 sub-lethal failure to C. dubia and 1 lethal and 1 sub-lethal failure to P. promelas during the last five years. A WET limit is not recommended at this time. However, in order to generate a complete biomonitoring record, the frequency reduction option will not be available in the reissued permit.

Dilution Series – The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in toxicity tests. These additional concentrations shall be 24%, 32%, 43%, 57%, and 76%. The low-flow effluent concentration (critical low-flow dilution) is defined as 76% effluent. The critical dilution is calculated in Appendix A-1 of this statement of basis. Results of all dilutions shall be documented in a full report according to the test method publication mentioned in **Part II Section E** under Whole Effluent Toxicity. This full report shall be submitted to the Office of Environmental Compliance as contained in the Reporting Paragraph located in **Part II Section E** of the permit.

The draft permit does not contain whole effluent toxicity limits, only biomonitoring requirements. The permit may be reopened to require whole effluent toxicity (WET) limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or waterbody. Modification or revocation of the permit is subject to the provisions of LAC 33:IX.2903. Accelerated or intensified toxicity testing may be required in accordance with Section 308 of the Clean Water Act.

**OUTFALL 002**

Because discharges from outfall 002 will contain treated sanitary wastewater from a facility with less than 5,000GPD maximum expected flow, effluent limits are based on the Class I Sanitary Discharge General Permit.

| Effluent Characteristic | Monthly Avg. | Daily Max. | Basis |
|---|---|---|---|
| $BOD_5$ | --- | 45 mg/l | Class I Sanitary Discharge General Permit effective December 1, 2007 and BPJ from previously issued water discharge permits for similar facilities/effluents. |
| TSS | --- | 45 mg/l | Class I Sanitary Discharge General Permit effective December 1, 2007 and BPJ from previously issued water discharge permits for similar facilities/effluents. |
| Fecal Coliform | --- | 400 col/100ml | Class I Sanitary Discharge General Permit effective December 1, 2007 and BPJ from previously issued water discharge permits for similar facilities/effluents. |

Concentration limits are used in accordance with LAC 33:IX.2709.F.1.b which states that mass limitations are not necessary when applicable standards and limitations are expressed in other units of measurement.

**Other Effluent Limitations for Outfall 002:**

**1) pH**

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time. (Limits as established through BPJ considering BCT for similar waste streams in accordance with LAC 33:IX.5905.C.)

**2) Solids and Foam**

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

**OUTFALLS 003, 004, and 005**

The previous permit contained reporting requirements for turbidity, nitrite/nitrate, ammonia, magnesium, arsenic, barium, cadmium, cyanide, lead, mercury, selenium, and silver. These reporting requirements were based on the NPDES General Stormwater Permit for Industrial Activities issued September 9, 1992. They were contained in the originally issued permit (effective April 1, 1999) as well. Discharges from these outfalls are intermittent and do not occur at critical low flow conditions. Because neither reporting nor threshold limits for these parameters are required by the LPDES Multi-Sector General Permit issued May 1, 2006, they are not included in the draft permit.

River Birch was issued an Administrative Order June 30, 2009 (EDMS Doc No. 42193912) granting them authority to accept exploration and production wastes (crude oil spill clean-up and drilling waste defined as mud, fluids, and cuttings) for disposal in the landfill. For accepting the waste additional sampling requirements were established in the draft permit. The additional requirements included increased monitoring for priority pollutants at outfall 001 and a chloride limit at outfall 003, 004, and 005.

Final limits shall become effective on the effective date of the permit and expire on the expiration date of the permit.

| Effluent Characteristic | Monthly Avg. | Daily Max. | Basis |
|---|---|---|---|
| TOC | --- | 50 mg/l | Previous permit and Multi-Sector General Permit-Sector L issued May 1, 2006. |
| Oil & Grease | --- | 15 mg/l | Previous permit and Multi-Sector General Permit-Sector L issued May 1, 2006. |
| Chlorides | --- | 850 mg/l | Administrative Order, ID No. 1340-00223 issued June 30, 2009. |

**Other Effluent Limitations:**

**1) pH**

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time. (Limits as established through BPJ considering BCT for similar waste streams in accordance with LAC 33:IX.5905.C.)

**2) Solids and Foam**

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

## X. PREVIOUS PERMITS:

**LPDES Permit No. LA0099473:** Issued: February 1, 2005
Expired: January 31, 2010

Outfall 001 – interim limits (effective until two years from the effective date)

| Effluent Characteristic | Discharge Limitations | | Monitoring Requirements | |
|---|---|---|---|---|
| | Monthly Avg. | Dailly Max. | Measurement Frequency | Sample Type |
| Flow | Report | Report | Continous | Recorder |
| $BOD_5$ | 30 mg/l | 45 mg/l | 1/month | Grab |
| TSS | 30 mg/l | 45 mg/l | 1/month | Grab |
| Ammonia-Nitrogen | 4.9 mg/l | 10 mg/l | 1/month | Grab |
| Oil and grease | --- | 15 mg/l | 1/month | Grab |
| Chlorides | --- | 850 mg/l | 1/month | Grab |
| Sulfates | --- | 250 mg/l | 1/month | Grab |
| Turbidity (NTU) | Report mg/l | Report mg/l | 1/month | Grab |
| Priority Pollutants | --- | Report ug/l | 1/6 month | 24-hr.composite |
| pH | --- | --- | 1/month | 24-hr.composite |
| Alpha Terpineol* | 0.016 mg/l | 0.033 mg/l | 1/quarter | 24-hr.composite |
| Benzoic Acid | 0.071 mg/l | 0.12 mg/l | 1/quarter | 24-hr.composite |
| p-Cresol | 0.014 mg/l | 0.025 mg/l | 1/quarter | 24-hr.composite |
| Zinc | 0.11 mg/l | 0.2 mg/l | 1/quarter | 24-hr.composite |
| Phenol | 0.015 mg/l | 0.026 mg/l | 1/quarter | 24-hr.composite |

Outfall 001 – final limits (effective two years from the effective date)

| Effluent Characteristic | Discharge Limitations | | Monitoring Requirements | |
|---|---|---|---|---|
| | Monthly Avg. | Daily Max. | Measurement Frequency | Sample Type |
| Flow | Report | Report | Continuous | Recorder |
| $BOD_5$ | 30 mg/l | 45 mg/l | 1/month | Grab |
| TSS | 30 mg/l | 45 mg/l | 1/month | Grab |
| Ammonia-Nitrogen | 4.9 mg/l | 10 mg/l | 1/month | Grab |
| Oil and grease | --- | 15 mg/l | 1/month | Grab |
| Chlorides | --- | 850 mg/l | 1/month | Grab |
| Sulfates | --- | 250 mg/l | 1/month | Grab |
| Fecal Coliform Colonies | 200 | 400 | 1/month | Grab |
| Turbidity (NTU) | Report mg/l | Report mg/l | 1/month | Grab |
| Priority Pollutants | --- | Report ug/l | 1/6 months | 24-hr.composite |
| pH | --- | --- | 1/month | 24-hr.composite |
| Alpha Terpineol* | 0.016 mg/l | 0.033 mg/l | 1/quarter | 24-hr.composite |
| Benzoic Acid | 0.071 mg/l | 0.12 mg/l | 1/quarter | 24-hr.composite |
| p-Cresol | 0.014 mg/l | 0.025 mg/l | 1/quarter | 24-hr.composite |
| Zinc | 0.11 mg/l | 0.2 mg/l | 1/quarter | 24-hr.composite |
| Phenol | 0.015 mg/l | 0.026 mg/l | 1/quarter | 24-hr.composite |

Outfall 002

| Effluent Characteristic | Discharge Limitations | | Monitoring Requirements | |
|---|---|---|---|---|
| | Monthly Avg. | Weekly Avg. | Measurement Frequency | Sample Type |
| Flow | Report | Report | 1/month | Estimate |
| $BOD_5$ | --- | 45 mg/l | 1/month | Grab |
| TSS | --- | 45 mg/l | 1/month | Grab |
| Fecal Coliform Colonies | --- | 400 | 1/month | Grab |
| pH | --- | --- | 1/month | Grab |

Outfall 003, 004, 005

| Effluent Characteristic | Discharge Limitations | | Monitoring Requirements | |
|---|---|---|---|---|
| | Monthly Avg. | Daily Max. | Measurement Frequency | Sample Type |
| Flow | Report | Report | 1/daily | Estimate |
| TOC | --- | 50 mg/l | 1/month | Grab |
| Oil &grease | --- | 15 mg/l | 1/month | Grab |
| TSS | --- | Report | 1/month | Grab |
| Ammonia | Report | Report | 1/month | Grab |
| Nitrate+Nitrite | --- | Report | 1/6 months | 24-hr.composite |
| Turbidity | --- | Report | 1/6 months | 24-hr.composite |
| pH | --- | --- | 1/6 months | 24-hr.composite |
| Total Arsenic | --- | Report | 1/6 months | 24-hr.composite |
| Total Barium | --- | Report | 1/6 months | 24-hr.composite |
| Total Cadmium | --- | Report | 1/6 months | 24-hr.composite |
| Total Cyanide | --- | Report | 1/6 months | 24-hr.composite |
| Total Lead | --- | Report | 1/6 months | 24-hr.composite |
| Total Magnesium | --- | Report | 1/6 months | 24-hr.composite |
| Magnesium (Dissolved) | --- | Report | 1/6 months | 24-hr.composite |
| Total Mercury | --- | Report | 1/6 months | 24-hr.composite |
| Total Selenium | --- | Report | 1/6 months | 24-hr.composite |
| Total Silver | --- | Report | 1/6 months | 24-hr.composite |
| pH | --- | --- | 1/6 months | 24-hr.composite |
| TDS | --- | --- | 1/6 months | 24-hr.composite |
| Total Chromium | --- | --- | 1/6 months | 24-hr.composite |

The permit contains biomonitoring.
The permit contains stormwater pollution prevention language.

## XI. ENFORCEMENT AND SURVEILLANCE ACTIONS:

### A) Inspections

A review of the files indicates the following most recent inspection was performed for this facility.

Date: March 22, 2004
Inspector: John Calvin, Dwight Bradshaw
Findings and/or Violations:

1. DMRs and lab reports were reviewed from April, 2003 thru February, 2004. The Stormwater Pollution Prevention Plan and Spill Prevention Controls were also reviewed. Outfalls 001, 002, 003, 004, and 005 were observed.
2. Areas of concern were permit excursions at outfall 001 (chlorides) and 002 (TSS and fecal) for the period of review.

### B) Compliance and/or Administrative Orders

A review of the files indicates the following most recent enforcement actions administered against this facility:

**LDEQ Issuance:**

Docket #: MM-CN-03-0105 (multi-media action)
Date Issued: March 28, 2006
Findings of Fact:

1. The permittee was not sampling all parameters at the correct frequency.
2. The permittee was cited for permit limit violations.

Order:

The permittee was ordered to submit an explanation for violations and corrective actions taken to prevent recurrence. A settlement agreement was reached to address violations. No further action was taken (See File Memo dated June 19, 2006.) (EDMS Doc. No. 34409599)

### C) DMR Review

A review of the discharge monitoring reports for the period beginning **July, 2006** through **March, 2009** has revealed the following violations:

| Parameter | Outfall | Period of Excursion | Permit Limit | Reported Quantity |
|---|---|---|---|---|
| Fecal coliform | 001 | September, 2009 | 400 col/100ml | 3000 |
| Fecal coliform | 001 | September, 2009 | 200 col/100ml | 3000 |
| Fecal coliform | 001 | March, 2009 | 400 col/100ml | >20,000 |
| Fecal coliform | 001 | March, 2009 | 200 col/100ml | >20,000 |
| Fecal coliform | 002 | January, 2008 | 400 col/100ml | 800 |

## XII. ADDITIONAL INFORMATION:

The Louisiana Department of Environmental Quality (LDEQ) reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDLs for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as requested by the permittee and/or as necessary to achieve compliance with water quality standards. Therefore, prior to upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

This permit may be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitations issued or approved under sections 301(b)(2)(C) and (D); 304(b)(2); and 307(a)(2) of the Clean Water Act or more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional water quality studies and/or TMDLs, if the effluent standard, limitations, water quality studies or TMDLs so issued or approved:

a) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

b) Controls any pollutant not limited in the permit; or

c) Requires reassessment due to change in 303(d) status of waterbody; or

d) Incorporates the results of any total maximum daily load allocation, which may be approved for the receiving water body.

At present, the **Monitoring Requirements, Sample Types, and Frequency of Sampling** as shown in the permit are as follows:

**001**

| Effluent Characteristics | Monitoring Requirements | |
|---|---|---|
| | Measurement Frequency | Sample Type |
| Flow | Continuous | Recorder |
| BOD | 1/month | Grab |
| TSS | 1/month | Grab |
| Ammonia-nitrogen | 1/month | Grab |
| Oil and grease | 1/month | Grab |
| Sulfates | 1/month | Grab |
| Chlorides | 1/month | Grab |
| TDS | 1/month | Grab |
| Fecal coliform | 1/month | Grab |
| Pollutant Scan | 1/quarter | 24-hr. composite |
| pH | 1/month | Grab |
| Alpha terpineol | 1/quarter | 24-hr. composite |
| Benzoic acid | 1/quarter | 24-hr. composite |
| p-Cresol | 1/quarter | 24-hr. composite |
| Zinc | 1/quarter | 24-hr. composite |
| Biomonitoring | 1/quarter | 24-hr. composite |

**002**

| Effluent Characteristics | Monitoring Requirements | |
|---|---|---|
| | Measurement Frequency | Sample Type |
| Flow | Daily | Estimate |
| BOD | 1/month | Grab |
| TSS | 1/month | Grab |
| Fecal coliform | 1/month | Grab |
| pH | 1/month | Grab |

**003, 004, 005**

| Effluent Characteristics | Monitoring Requirements | |
|---|---|---|
| | Measurement Frequency | Sample Type |
| Flow | Monthly | Estimate |
| TOC | 1/month | Grab |
| Oil and grease | 1/month | Grab |
| Chlorides | 1/month | Grab |
| pH | 1/month | Grab |

## XIII. TENTATIVE DETERMINATION:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to reissue a permit for the discharge described in this Statement of Basis.

## XIV. REFERENCES:

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 8, "Wasteload Allocations / Total Maximum Daily Loads and Effluent Limitations Policy," Louisiana Department of Environmental Quality, 2008.

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 5, "Water Quality Inventory Section 305(b) Report," Louisiana Department of Environmental Quality, 2006.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Chapter 11 - "Louisiana Surface Water Quality Standards," Louisiana Department of Environmental Quality, 2009.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Subpart 2 - "The LPDES Program," Louisiana Department of Environmental Quality, 2009.

Low-Flow Characteristics of Louisiana Streams, Water Resources Technical Report No. 22, United States Department of the Interior, Geological Survey, 1980.

Index to Surface Water Data in Louisiana, Water Resources Basic Records Report No. 17, United States Department of the Interior, Geological Survey, 1989.

LPDES Permit Application to Discharge Wastewater, River Birch, Inc., River Birch Landfill, July 31, 2009.